

**REMARKS**

Claims 1-43 are pending and under examination.

By this amendment, claim 35 is amended to remove a duplicate “the.”

**I. Summary of Office Action**

**1. Provisional Statutory Double Patenting Rejection**

Claims 1-2, 5, 8-9, 11-19, 26-29 and 31 have been rejected as allegedly covering the same subject matter as claims 1-2, 5-7, 9-17, 30-33 and 35 of commonly-owned, co-pending U.S. application serial number 11/793,018.

**2. Rejections Under 35 U.S.C. §103—Obviousness**

- a. Claims **1, 6-7, 9-16, 19-21, 24-25, 30-31, 37-38 and 41-43** stand rejected as obvious over Myhre in view of Van Dun.
- b. Claims **1, 2-4, 8, 26-29 and 34-36** are rejected over Van Dun in view of Myhre.
- c. Claims **5, 22-23 and 39-40** stand rejected as allegedly obvious over Myhre in view of Van Dun and further in view of U.S. patent 5,346,926 to Sakamoto et al. (“Sakamoto”).
- d. Claims **17 and 18** stand rejected as allegedly obvious over Myhre in view of Van Dun and further in view of U.S. published application 2003/0149162 to Ahlstrand (“Ahlstrand.”).
- e. Claim **32** is rejected as allegedly obvious over Myhre in view of Van Dun and further in view of U.S. 5,770,540 to Garoff (“Garoff”).
- f. Lastly, claim **33** stands rejected as allegedly obvious over Myhre in view of Van Dun and further in view of U.S. 6,110,552 to Casey (“Casey”).

**II. Response to Office Action**

**i. Provisional Statutory Double Patenting Rejection**

Because this rejection is provisional, as no claims have yet been allowed in either application, Applicant requests that it be held in abeyance until such time as claims in one or both applications are found allowable.

2. Rejections Under 35 U.S.C. §103—Obviousness

a. The Relevant Law of Obviousness

Under *KSR v. Teleflex*, 550 U.S. 398 (2007), the Office “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.* at 1741. However, the Court noted that its precedents show that an invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* at 1740-41 (emphasis added). The fact finder must still take into account a number of factors “in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed.” *Id.* at 1740-41 (emphasis added). See also, *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (“In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.”) (emphasis added).

It also has long been recognized that “when the prior art teaches away from the claimed solution. . . . obviousness cannot be proven merely by showing that a known composition could have been modified by routine experimentation or solely on the expectation of success; it must be shown that those of ordinary skill in the art would have had some apparent reason to modify the known composition in a way that would result in the claimed composition.” *Ex Parte Whalen*, 2008 WL 2957928 (Bd.Pat.App. & Interf.), 89 U.S.P.Q.2d 1078. See also *U.S. v. Adams*, 383 U.S. 39, 40 (1966) (“When prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.”); and *In re Grasselli*, 713 F.2d 731, 743 (Fed Cir 1983) (“It is improper to combine references where the references teach away from their combination.”). A prior art reference must be considered in its entirety, *i.e.*, as a whole, including any part of the disclosure that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1552 (Fed. Cir. 1983). See also

*Optivus Tech., Inc. v. Ion Beam Applications S.A.*, 469 F.3d 978, 984 (Fed. Cir. 2006) (“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.”).

- b. Claims 1, 6-7, 9-16, 19-21, 24-25, 30-31, 37-38 and 41-43 stand rejected as obvious over Myhre in view of Van Dun.

According to the Examiner, Myhre discloses a film composition comprising a filler and a bimodal polyethylene composition, further comprising a low molecular weight component and a second higher molecular weight component, where the bimodal polyethylene has a density of 918-935 kg/m<sup>3</sup> (paragraph 0063) as recited in claim 1. Myhre also discloses the limitations of the other cited claims according to the Examiner (see Office Action at p. 4). The Examiner acknowledges that Myhre does not disclose the molecular weight of the composition, but the Examiner cites Van Dun as disclosing a bimodal polyethylene composition comprising a low molecular weight ethylene in a range of 10,000 to 40,000 g/mol, and a high molecular weight ethylene in a range of 100,000 to 600,000 g/mol, which exhibits improved durability and tensile cracking resistance (see claim 1, col. 1, l. 56; col. 2, l. 51; col. 6, ll. 1-2 and 33-34; and col. 20, l. 47). Van Dun does not appear to disclose the molecular weight of the final composition.

This rejection is respectfully traversed. The Myhre and Van Dun references cannot be combined. Myhre discloses a composition for use as a breathable film, which must have a very high water vapor transmission rate exceeding 3000 g/m<sup>2</sup>/24 hrs. The density of the Myhre composition is somewhat low, between 918 and 935 g/m<sup>3</sup>. In contrast, Van Dun discloses a bimodal high density polyethylene composition (greater than 950 g/m<sup>3</sup>) especially suitable for use in making transmission and distribution pipes for water and gas, although use as films are disclosed.

The compositions of Van Dun which are suitable to make water and gas transmission pipes are not the same or similar to those used to make breathable films as in Myhre for the obvious reason that water and gas transmission pipes cannot be “breathable.” The Myhre and Van Dun compositions, in fact, do not have similar properties. In addition to not

producing breathable products, Van Dun's compositions have densities well above that required for Myhre and the presently claimed compositions ( $950 \text{ g/m}^3$  versus densities below  $940 \text{ g/m}^3$ ). Further, the exemplified Van Dun compositions have different  $\text{MFR}_2$  rates. Van Dun only measures the melt indices  $I_5$ ,  $I_{10}$  or  $I_{21.6}$ , and not  $I_2$ , which would be equivalent to the  $\text{MFR}_2$ . See Tables 6 and 7. However, because Van Dun's  $I_5$  measurements overlap with Myhre's  $\text{MFR}_2$  measurements (both are from about .2 to .47 g/10 min), it is impossible that Van Dun's composition would also have an  $I_2$  similar to Myhre's  $\text{MFR}_2$ . Because the melt index ( $\text{MFR}_2/I_2$ ) is inversely proportional to the molecular weight, Van Dun's compositions also have different molecular weights than Myhre's.

Thus, one of ordinary skill in the art would not have had any reason to look to Van Dun for guidance when seeking to make compositions suitable for films such as disclosed in Myhre, and would not have been motivated to appropriate the specific molecular weights described in Van Dun from those teachings. The references are incompatible. What the Examiner has apparently done is select isolated elements from Van Dun without considering the teachings of Van Dun as a whole.

In addition, the references teach away from making the claimed polymer composition. The present invention discloses a polymer composition for use in polymer films having highly **reduced water-vapor transmission rate**. See paragraph 0002. This is the complete opposite of Myhre, which requires that the resulting polymer films have a "surprisingly high water vapor transmission rate" (see abstract and paragraph 0084). Further, the presently claimed bimodal composition has "low average molecular weight," while that of Myhre has a high average molecular weight of between 90,000 to 230,000 g/mol. The presently claimed composition also has a much higher  $\text{MFR}_2$  than Myhre (between 5-20 g/10 min compared with 0.1-0.4 g/10 min). Thus, one of skill in the art would not appropriate any teachings of Myhre when seeking to make films having the lowest possible water vapor transmission, because the differences in the compositions naturally result in differences in film properties. One certainly would not have had a reasonable expectation of success of producing compositions for use in reduced water-vapor transmission rate by following the teachings of Myhre which disclose compositions for producing films with

surprisingly high vapor transmission rates (regardless of the appropriation from Van Dun of the molecular weights of the polymer components).

Nor would a skilled artisan have turned to Van Dun for guidance when seeking to make polymer compositions as presently claimed, or have had a reasonable expectation of success of making the claimed compositions by following the teachings of Van Dun. Although Van Dun discloses using a low molecular weight component and a high molecular weight component having overlapping molecular weights with the low and high-molecular weight components presently claimed, that is where the similarities end. Van Dun's low molecular weight component has a density greater than  $960 \text{ g/m}^3$  while that of the instant composition has a density of  $905$  to  $935 \text{ kg/m}^3$ . Further the  $\text{MFR}_2$  ( $\text{I}_2$ ) of Van Dun's low molecular weight polymer is from  $30$  to  $2000 \text{ g/10 min.}$  in contrast to that of the present invention which has an  $\text{MFR}_2$  of from  $1.0$  to  $20 \text{ g/10 minutes.}$  The  $\text{MFR}_2$  of Van Dun's high molecular weight polymer is from  $0.1$  to  $1.0 \text{ g/10 minutes}$  while that of the present invention it is  $1.0$  to  $20 \text{ g/10 minutes.}$

Thus, even improper combination of the references would not yield the presently claimed invention. The components of both the prior art compositions differ markedly from those of the present invention and cannot be interchanged. The Examiner has appropriated isolated components from the prior art to allegedly arrive at the claimed invention without considering the inapposite teachings of the prior art, as a whole, with respect to their combination, and with respect to the presently claimed invention. The Examiner's combination of references is therefore improper.

Withdrawal of this rejection is respectfully requested.

- c. Claims 1, 2-4, 8, 26-29 and 34-36 are rejected over Van Dun in view of Myhre.

According to the Examiner, Van Dun does not disclose a filler but discloses all of the other limitations of the cited claims, and Myhre discloses a filler.

This rejection is respectfully traversed. It has been established above that the Myhre and Van Dun references teach away from each other and from the presently claimed

polymer. Because of the differences in the properties of the polymers disclosed in the references, which directly correlate with their intended use, one would not look to Myhre for guidance and certainly would not specifically select a filler as the only element from Myhre for use in a polymer based on the vague teaching referenced by the Examiner.

Applicant points out that neither Myhre nor Van Dun disclose a wax, which is a limitation in claims 2-4.

Withdrawal of this rejection is respectfully requested.

d. Claims 5, 22-23 and 39-40 stand rejected as allegedly obvious over Myhre in view of Van Dun and further in view of U.S. patent 5,346,926 to Sakamoto et al. ("Sakamoto").

Sakamoto is cited in addition to Myhre and Van Dun for disclosing the specific wax to be used as a component of polymer A.

We note that Myhre and Van Dun do not render the present claims obvious for the reasons stated above. Although disclosing a wax with a molecular weight in the presently claimed range, Sakamoto's composition comprises a low density polyethylene and a high density polyethylene in addition to the wax, for production of a highly-expandable polymer for use on insulated electric wires. Sakamoto does not remedy the deficiencies of Myhre and Van Dun, addressed above. In fact, Sakamoto discloses polymer compositions with densities above the claim density (see examples). Again, this is another example of improperly selecting isolated components from the prior art without a reason.

e. Claims 17 and 18 stand rejected as allegedly obvious over Myhre in view of Van Dun, and further in view of U.S. published application 2003/0149162 to Ahlstrand ("Ahlstrand").

Ahlstrand is cited for the teaching that talc is the filler and an antioxidant. Ahlstrand's composition is for use to make pressure resistant pipes and the improvement is the addition of a nucleating agent that acts as a nucleus for a polyethylene crystal. Myhre and Van Dun do not render the present claims obvious for the reasons stated above. Further, the properties of the high and low molecular weight polymers used in Ahlstrand are also

different from those used in the present invention and would have provided no reason or motivation to a skilled artisan to expressly select a talc filler from the reference.. For example, the MFR<sub>2</sub> of Ahlstrand's LMWP is 50 to 2000 g/10 min. compared with 1.0 to 20 g/10 minutes for the instantly claimed LMWP and the density of Ahlstrand's LMWP is 960-980 kg/m<sup>3</sup>, while that of the present invention is 905 to 935 kg/m<sup>3</sup>.

As explained above, it is contrary to current law to appropriate isolated teachings from inapposite references to make an obviousness rejection. One of ordinary skill in the art would not have a reason to select talc as a filler from the teachings of Myhre, who discloses completely different compositions.

- f. Claim 32 is rejected as allegedly obvious over Myhre in view of Van Dun and further in view of U.S. 5,770,540 to Garoff ("Garoff").

The Examiner asserts that Garoff discloses a high activity procatalyst as recited in claim 32 for use in producing ethylene polymers. Myhre and Van Dun do not render the present claims obvious for the reasons stated above and Garoff does not remedy the deficiencies.

- g. Lastly, claim 33 stands rejected as allegedly obvious over Myhre in view of Van Dun and further in view of U.S. 6,110,552 to Casey ("Casey").

Casey allegedly discloses a composite release line comprising a paper substrate and a polymer base layer applied on the substrate to make a multilayer material for pressure sensitive adhesive labels.

Myhre and Van Dun do not render the present claims obvious for the reasons stated above and Garoff does not remedy the deficiencies.

### III. Conclusion

The Examiner has not met his burden of providing sufficient reasons for combining the above-discussed references in the manner outlined in the rejections. The fact that all references disclose polymers is woefully insufficient to provide the required reason to combine the references. Moreover, Applicant has demonstrated that the references cited teach away from each other and the claimed invention. Thus, the Examiner has failed to make *prima facie* case of obvious under the existing legal standard.

**EXCEPT** for issue fees payable under 37 C.F.R. § 1.18, the Director is hereby authorized by this paper to charge any additional fees during the entire pendency of this application, including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 13-3250, reference No. 37488.01300US. This paragraph is intended to be a

**CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

**MILBANK, TWEED, HADLEY & McCLOY LLP**

By: 

Stephanie R. Amoroso, Ph.D.  
Reg. No. 51,401

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**Customer No. 38647**  
MILBANK, TWEED, HADLEY &  
McCLOY LLP  
1850 K Street, NW  
Suite 1100  
Washington, DC 20006  
202-835-7525